

AN INLAND RANGE EXTENSION FOR *OGYRIS IDMO* (HEWITSON) (LEPIDOPTERA: LYCAENIDAE)

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Abstract

A population of *Ogyris idmo* (Hewitson) is recorded from near Wubin, Western Australia. This record, 200 km from the west coast, represents a substantial inland range extension for what was previously considered a near-coastal species.

Introduction

Ogyris idmo (Hewitson, 1862), the Large Bronze Azure, has previously been recorded from the higher rainfall coastal and near coastal areas of southwestern Western Australia, extending up to ~100 km inland at Salmon Gums (Braby 2000, Braby *et al.* 2014). Female specimens show some latitudinal variation in the upperside colouration; most specimens are purple above, although specimens from Cape Arid have the basal areas of the forewing upperside bright blue (Field 1999), while a specimen taken at Port Denison is more brightly and extensively purple than Perth specimens (Williams *et al.* 1995). The recorded flight period of the butterfly is from September to December (Braby 2000).

Observations

Two specimens of *Ogyris idmo*, a male and a female, were collected by one of us (DMK) in the early afternoon of 29 September 2012, from a site 44 km north-east of the Western Australian wheatbelt town of Wubin. The site is alongside the Great Northern Highway at 29°49'47"S, 116°57'23"E. These specimens were in freshly emerged condition and the female (Fig. 1) is notable for being violet (*i.e.* bluish-purple) on the upper wing surface rather than the usual purple. The male is typical of *Ogyris idmo* males. The site near Wubin was visited the following day by AAEW and although a male was seen it was not caught. The following day, however, a worn female was caught by AAEW at 10.00 h, with a further female seen but not caught in the afternoon. The caught female has the typical purple colouration of most *Ogyris idmo* females.

Discussion

Several aspects of this discovery are noteworthy. The first is that the population is much farther inland than any other population of the butterfly – roughly 200 km from the coast. Material from the specimens is currently scheduled for DNA analysis to determine if there are any genetic peculiarities associated with this isolation. Indeed, the site is at a distance from the coast where one might more reasonably expect to encounter the related Arid Bronze Azure, *Ogyris subterrestris petrina* Field, 1999. The only known

extant population of *O. s. petrina* is approximately 240 km from the coast. Michael Braby observed that 'the boundary between [the Eyrean Zone and the Southwestern Zone] is over a fairly broad region and [the Wubin site] looks like it sits within this transition zone' (M.F. Braby pers. comm.).



Fig. 1. *Ogyris idmo* female from 44 km NE of Wubin, Western Australia.

The colour variation between the two female specimens from the inland Wubin population is interesting but not entirely unexpected; one specimen is clearly violet although the worn specimen appears to be purple. Williams *et al.* (1995) referred to a female from Port Denison that is 'more brightly and extensively purple above than Perth specimens, and in this respect appears somewhat intermediate between Perth and Cape Arid (Field 1999) specimens'. The transition from purple to blue colouration between coastal and inland populations is not confined to *Ogyris idmo*. The same phenomenon is true for another lycaenid species, *Hypochrysops ignita* (Leach, 1840), where south-coastal populations are purple above while in an inland population at Watheroo National Park males are iridescent purple and females bright metallic blue (Williams *et al.* 1993, Williams *et al.* 1998).

Finally, the fact that the specimen collected by AAEW is worn, at the start of what is normally considered to be *Ogyris idmo*'s flight period (as evidenced by the two freshly emerged specimens caught by DMK), suggests that this population might represent a slight shift in the flight period of the butterfly (perhaps to as early as late August). At present, *O. idmo* is already known to fly in some locations (e.g. Port Denison) in September.

It is interesting that *Ogyris idmo* has now been located this far inland. Further investigation is required to establish whether or not it is sympatric or parapatric with *Ogyris subterrestris petrina* within the transition zone between the Eyrean and Southwestern zoogeographic regions. A recent study has also shown that *Ogyris subterrestris petrina* might also be narrowly sympatric or parapatric with *Ogyris zosine* (Braby *et al.* 2014, Braby pers. comm.).

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